

CLAIMS

Claims 1-6 (Canceled)

7. (Further Amended) A third apparatus for a semiconductor producing apparatus having a bellows configured as a pump and placed in a pump body, said bellows made of polytetrafluoroethylene including extending and contracting portions configured by forming ridge-like folds and valley-like folds in a vertically alternate and continuous manner, which are extendingly and contractingly deformable in an axial direction said axial direction defining a vertical axis, said ridge-like folds and said valley-like folds having a vertically extending portion connecting their respective extending and contracting portions, a liquid chamber formed inside said bellows, a suction port and a discharge port formed in an inner bottom face of said pump body facing said liquid chamber, wherein:

liquid is sucked from said suction port into said liquid chamber by extension of said bellows, and the liquid in said liquid chamber is discharged from said discharge port by contraction of said bellows;

said extending and contracting portion of said bellows is formed into a shape in which a lower one of upper and lower lamella portions of each of said ridge-like folds is inclined downwardly toward said vertical axis, not only in an extending state but also in a contracting state, and

in the contracting state, the upper lamella portion of each ridge-like fold is formed to be downwardly inclined.

8. (Previously Added) The fluid apparatus having a bellows according to claim 7, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 1 to 45°.

9. (Previously Added) The fluid apparatus having a bellows according to claim 7, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 5 to 15°.

10. (Further Amended) A fluid apparatus for a semiconductor producing apparatus having a bellows configured as an accumulator and placed in an accumulator body, said bellows made of polytetrafluoroethylene including extending and contracting portions configured by forming ridge-like folds and valley-like folds in a vertically alternate and continuous manner, which are extendingly and contractingly deformable in an axial direction, said axial direction defining a vertical axis said ridge-like folds and said valley-like folds having a vertically extending portion connecting their respective extending and contracting portion; a liquid chamber inside said bellows and an air chamber outside said bellows, an inflow port and an outflow port formed in an inner bottom face of said accumulator body facing said liquid chamber; wherein:

a liquid pressure in said liquid chamber balances with an air pressure in said air chamber;

said extending and contracting portion of said bellows is formed into a shape in which a lower one of upper and lower lamella portions of each of said ridge-like folds is inclined downwardly toward said vertical axis, not only in an extending state but also in a contracting state; and

in the contracting state, the upper lamella portion of each ridge-like fold is formed to be downwardly inclined..

11. (Previously Added) The fluid apparatus having a bellows according to claim 10, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 1 to 45°C.

12. (Previously Added) The fluid apparatus having a bellows according to claim 10, wherein an inclination angle of said lower lamella portion in the contracting state of each of said ridge-like folds is set to 5 to 15°.